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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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08/484,935 06/07/95 MOORE

C NANO-001/090

COOLEY GOWARD CASTRO  
HUDDLESON AND TATUM  
FIVE PALO ALTO SQUARE  
3000 EL CAMINO REAL  
PALO ALTO CA 94306

B3M1/1212

EXAMINER

ENG, D

ART UNIT

PAPER NUMBER

2315

DATE MAILED:

12/12/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

**OFFICE ACTION SUMMARY**

- ☒ Responsive to communication(s) filed on 12/7/95
- ☒ This action is FINAL.

- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**

- ☒ Claim(s) 71-100 is/are pending in the application.
- Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 71-100 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- ☐ Notice of Reference Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

ATTENTION ON THE FOLLOWING PAGES -

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The amendment filed on April 10, 1996 has been entered. The active claims are 71-100.

Applicants are requested to update the status of parent application.

A new abstract which is more aptly descriptive of the invention claimed is requested. No improvement is seen from the present abstract. Supplying instructions from memory to CPU via a pipeline having fetch means, supply means and instruction register is well known in the art.

A new summary of the invention which is directed to the claimed invention is requested.

Claims 71-90 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Functional relationship between the instruction supplying means and the instruction decoding means as recited in claim 71 is not clear. It is not clear why the instruction supplying means which is recited for supplying instructions from an instruction register to a CPU is required to be configured by a decoder to select an operand from the instruction register which is recited for buffering instructions and not operands. No meaningful operation or improvement is seen. Other independent claims, claims 91 and 97 for example, has similar defect.

With respect to claim 76, parent claim 74 is an apparatus and not a method claim.

Scope of claim 77-79, 81 and 98-99 is not clear. No meaningful operation is seen.

In claim 88, it is not seen how the width of an operand is related to supplying instructions from an instruction register to a processor.

In claim 92, it is not clear whether or not an instruction has been skipped.

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 71-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boufarah in view of May.

With respect to claims 71, 77-79, 84, 87, 91 and 96-99, see at least Figures 1 and 3 in Boufarah. Boufarah teaches a microprocessor system comprising:

- a CPU 20,
- a memory 10,
- a bus,
- an instruction fetching means 14,
- an instruction register 34, 36 and 38,
- an instructing supplying means 14,
- a counter (inherent program counter) and
- an instruction decoding means (processors 20 and 22).

Boufarah does not explicitly show an instruction having an op-code an operand. However, May shows in Figure 5 an instruction having an op-code and an operand together. From the teaching of May, one of ordinary skill in the art should readily recognize that the memory reference instruction in Boufarah also includes an op-code and an operand. When the supplying means supplies instructions from the instruction register to the processor, both the op-codes and the operands are also supplied.

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With respect to claims 72-73 and 92-93, May teaches SKIP at the top of column 16.

With respect to claims 74-76 and 94-95, May teaches system for executing loop instructions (see "jump" at the bottom of column 15).

With respect to claims 80, 82-83, 86 and 100, Figure 3 of Boufarah teaches how branch instruction is executed.

With respect to claim 85, memory access instruction is well known in the art.

With respect to claims 88-90, May teaches variable length operand instruction (see column 21).

#### REMARKS

The update of the status of parent application should be made in the specification. See the first sentence of the specification amended on June 7, 1995.

Applicants contend that Boufarah's instruction does not include an operand. The secondary reference, May, teaches that memory reference instructions contain both op-code and operand.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire **THREE MONTHS** from the date of this action. In the event a first response is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

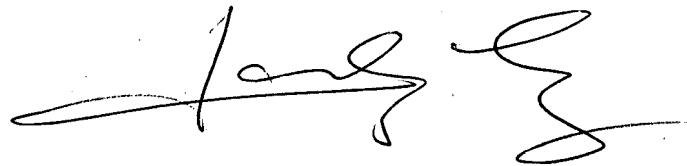
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

A handwritten signature in black ink, appearing to read 'David Y. Eng', with a stylized flourish at the end.

DAVID Y. ENG  
PRIMARY EXAMINER  
ART UNIT 232